SOLVAY MINERALS

[redacted]

July 3, 1996

Lee Gribovicz
Wyoming Department of Environmental Quality
210 Lincoln St.
Lander, WY 82520

Dear Lee:

Per your request, enclosed you will find the supplement to the BACT Analysis of the February, 1996 VOC PSD. Based on vendor information, you will note that ESP/wet scrubber control technology is considered an infeasible technology for VOC control. In addition, the review of the BACT/LAER Clearinghouse revealed no ESP/wet scrubber VOC control technologies for similar combustion processes.

If you have any questions concerning this BACT Analysis Supplement, feel free to contact me at (307) 872-6571.

Sincerely,

Dolly A. Potter
Environmental Engineer

enclosure

cc: Chuck Collins
Bernie Dailey

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SUPPLEMENTAL VOC BACT ANALYSIS

8.3.7 Electrostatic Precipitator and Wet Scrubber

The Wyoming Department of Environmental Quality (WDEQ) requested a BACT Analysis for an electrostatic precipitation (ESP)/wet scrubber in series for VOC control.

The WDEQ sited the Pacific Power & Light Jim Bridger facility as having the ESP/scrubber technology. Per Dan Gillespie, the Environmental Director of the Pacific Power & Light's Jim Bridger Plant, the ESP and wet scrubber in series are used only for controlling particulate matter (ESP) and SO_2 emissions (wet scrubber). They are not for VOC control. This is confirmed in the BACT/LAER Clearinghouse entry for Pacific Power & Light Permit/File No. CT-23, permit issuance date December 1, 1975.

In spite of the above determination, URS re-opened its technology assessment. The following vendors were contacted to obtain information on an ESP/scrubber technology for controlling VOC emissions:

- Ceilcote Air Pollution Control,
- Croll-Reynolds Company Inc.,
- Westport Environmental Systems, and
- Ducon Environmental Services.

According to the vendors listed above, the technology of an ESP in series with a wet scrubber is not a feasible technology for VOC control. The ESP is not effective for removal of VOCs due to their low molecular weight and high volatility. Wet scrubbing is also infeasible for VOC removal due to the volatility and low solubility of the compounds that comprise the total VOCs.

According to the BACT/LAER Clearinghouse review of entries from the last five years, there are either no VOC control technologies listed or "efficient combustion" technology listed for the following processes:

- Coal Combustion
- Calciners and Dryers, Mineral Processing Facilities
- Metallic Mineral/Ore Processing
- Mining Operations
- Non-Metallic Mineral Processing
- Boilers

Electrostatic precipitators were only listed as a particulate matter control technology and wet scrubbing was only listed as an SO_2 control technology.

Per the EPA Draft New Source Review Workshop Manual, October 1990, pg. B-7, infeasible control technologies should be identified and excluded from the BACT Analysis. The ESP and wet scrubber technology for VOC control is not feasible and should not be included in the "BACT Top Down Analysis" for the Solvay application.